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08/21/97

**TO: Jet Propulsion Laboratory
Attn: Mr. Kirk Bilby
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SUBJECT: Letter Of Transmittal, Monthly Status Report

In accordance with Contract #960100, Infotec Development Inc. hereby submits one original hard copy of DRD MA006, Monthly Progress Report, for the month of July 97. Please contact me at 818-584-0878 for questions.

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ISDS Program Manager

Original and Copies to Mr. Don Lord (525 3600)

Cover Letter and Cost Appendices to:
Mr. Kirk Bilby (190 220)
Mr. David Spencer (264 426)

**Information Systems Development Support (ISDS) Contract
Monthly Progress Report**

Developed by
The ISDS Team
2700 E. Foothill, Suite 200
Pasadena CA 91107

Under Contract No. 960100
Control Number: \MAR's\..\9707-01.doc Rev 0
DRD # MA006
for the month of July 97

for the

California Institute of Technology
Jet Propulsion Laboratory
4800 Oak Grove Drive
Pasadena CA 91109-8099

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1. Executive Summary

"A brief narrative on significant accomplishments and events of the reporting period."

- ISDS Meritorious Service Awards were presented at the All Hands meeting and luncheon held at Victory Park on 1 August. Citations were read describing individual contributions to the program. Each person received a \$100 gift certificate to Barnes and Nobel. The following individuals received the award:
 - Calvin Cheung (CSC)
 - Jeff Deifik (IDI)
 - Michael Dern (CSC)
 - Robert Donnelly (CSC)
 - Ron Holden (IDI)
 - Susan Kientz (CSC)
 - Gary Oye (IDI)
 - Hon Tran (IDI)
 - John Veregge (CSC)
 - Maryanne Hills (IDI)
- We had a significant outbreak of the Wazzu virus and cleaned all our clients and servers.
- "A Little Rock On Mars," written by our own Sue Kientz, has been approved by JPL and a link to it has been placed on the official Mars Pathfinder home page at <http://mpfwww.jpl.nasa.gov/>. The Galileo program office is also considering a similar piece recently created by Sue.
- Briefings to key personnel at TMOD have continued. In the last thirty days we have visited Susan Kurtik, Joe Whackley, and Michael Stoloff. Meetings with Chuck Klose and Gael Squibb have been rescheduled at their request. All have been impressed with our capabilities and surprised to learn that we are a team member of the Lockheed/Martin CSOC team.

Significant personnel actions since the last report:

- CWO 11 - Mr. Steve Rockwell returned to work with ISDS on 11 August as the CDE for Multi-Use S/W and the Subsystem Interface Verifier.
- CWO 45 - On 22 August, Michael Guadarrama resigned with no notice and took a job with Telos. He informed us that he would be doing the same work, for the same customer, with a significant increase in salary. Ms. Jackie LeFever at Telos was contacted regarding this and she had no comment.
- CWO 67, Tech Doc Supt, Sec 5060- Three individuals were recently placed on contract to support this CWO, two of which were new hires. They are Vince Trinh, Chester Ng, and Danny Lee. This CWO was staffed within four days of having the requirement identified.

Open staff requirements

- There are currently no open staff requirements.

Contract Work Orders and Staff

22-Aug-97

#	Title	CWO Manager	Staff Members	
3	Telemetry Simulation Assembly (TSA II)	Kathleen	Rundstrom	
			Ron	Holden
			Youbin	Mao
			Matthew	Dailey
			Shyan-wee (Joseph)	Jao
8	Section Network/System Administrator	Roger	Thomson	
			Hajime	Sano
11	CSN Multi-Use S/W (MSW)	Kathleen	Rundstrom	
			Nhon	Hoang
			Julianna	Magallon
13	Goldstone Solar System Radar Data Acquisition Sys	Roger	Thomson	
			Robert	Frye
			Chad	Nikoletich

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#	Title	CWO Manager	Staff Members
14	DSCC Telemetry Subsystem (DTM) Software	Kathleen	Rundstrom Hon Tran Ron Holden Calvin Cheung Bo Cen
15	Product Verification Subsystem/SSCANSAR	Kathleen	Rundstrom Kenneth Bell
16	Enhancement & Maintenance of Metric Prediction	Roger	Thomson Jonathon Walther Jeffrey Schredder
17	GCF Interface	Edward	Embick David Haupt
27	Advanced Comm Services (ACS) Data Delivery	Kathleen	Rundstrom
28	Advanced Comm Services (ACS) Monitor/Control	Kathleen	Rundstrom Erik Barkley

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#	Title	CWO Manager	Staff Members
29	Monitor & Control X-Server Support	Edward	Embick Jay Cai
30	Network Control Program Common Services	Roger	Thomson Robert Donnelly Geoffrey Coward
31	Adv Comm Svcs Rel Net Svc CS	Kathleen	Rundstrom Michael Dern
32	Adv Comm Svcs Telem Chanl Assmbly CS	Kathleen	Rundstrom
33	DSCC Radio Science Comm Processor S/W	Kathleen	Rundstrom Vui Vu
36	Section 395 Programming Support	Edward	Embick John Veregge
38	SETS/OIS	Roger	Thomson Rhonda Bagnato
39	SPMC Support	Roger	Thomson Gary Oye

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#	Title	CWO Manager	Staff Members
43	System Admin Support to EIS	Roger	Thomson
			George Wang
			Michael Huang
			David Coppedge
45	Sea Dragon Command Center Test Bed	Kathleen	Rundstrom
			Michael Guadarrama
46	EIS File Service Technical Writer	Edward	Embick
			Susan Kientz
47	VLBI Project Software Engineer	Edward	Embick
			Jeff Deifik
48	MGSO Documentation Technical Support	Edward	Embick
			Martha Perdomo
49	Duplicating and Distribution Support	Edward	Embick
			Concepcion Alvarez
			Hao Le
			George Mondol
			Iris Young

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#	Title	CWO Manager	Staff Members
50	Electronic Forms and Inventory	Edward	Embick Dave Swantek Karen Gerfen
53	34 Meter Array Development	Kathleen	Rundstrom Ron Holden
54	Galileo CD Technical Writer	Edward	Embick Susan Kientz
55	TC & DM Test Support	Edward	Embick Cindy Lush
56	SPC and DMD Implementation	Edward	Embick Clyde Chadwick Jin Ma
57	UNIX System Administrator	Edward	Embick Dimitrios Gerasimatos
60	Command Processor Assembly	Edward	Embick Kenneth Bell
61	PowerBuilder	Edward	Embick Sam Panditaradyula
#	Title	CWO Manager	Staff Members

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63	Hybrid Tech Multi-Threading Architecture Supt	Roger	Thomson		
64	JASON	Roger	Thomson		
				Youbin	Mao
65	DS1 Librarian	Edward	Embick		
				Martha	Perdomo
66	DSN SW Reuse	Kathleen	Rundstrom		
67	Tech Doc Supt, Sec 5060	Roger	Thomson		
				Vince	Trinh
				Alexander	Lee
				Chester	Ng

2. CWO Status and Recommendations

Paragraphs in Italics below identify the generic context in which the status of each active CWO will be discussed. This is presented here as a guideline for both the writer and the reader.

Performance Status

“The Contract Work Order Manager’s assessment of progress made in meeting the requirements of the CWO. The CWO Manager shall identify current problems associated with these efforts and any corrective actions to be taken.”

Major Accomplishments

“Identify contractual deliveries, accomplishment of critical activities, Contract reviews and CWO milestones.”

Cost/Funds Status

“Address relevant areas of cost, such as potential cost problems, their estimated magnitude, planned corrective action and predicted cost outcome. Any projected changes in the CWO’s cost Estimate-at-Completion (EAC) shall be fully explained. Contrast the EAC with the current funds ceiling and identify funding shortfalls or overages. Identify funds expiration date.”

Schedule Status

“Identify activities and milestones that have slipped from the baseline schedule, with the reason(s) for the slip, and identification of the corrective action measures implemented.”

Quality/Config Management

“The Product Assurance Program Manager’s assessment of this CWO including current issues, accomplishment of tasking, plans, changes to budget requirements, et al.”

Problems and Proposed Solutions Summary

“The CWO Manager’s summary of problems and proposed solutions including requirements for support from JPL.”

Plans

- *“Forecast Accomplishments. Identify activities and milestones that are expected to be completed during the next reporting period.”*
- *“Proposed Re-plans. Identify schedule items that should be replanned and new items to be incorporated into the established baseline schedule.”*

“Proposed Cost Adjustments. Identify adjustments to the CWO Target Cost which are required for changes in scope.”

CWO Status Summary

CWO #	Title	Cost	Schedule	Performance	Staff	Funding
3	Telemetry Simulation Assembly (TSA II)					
8	Section Network/System Administrator					
11	DSN Multi Use Software (MSW)					
13	Goldstone Solar System Radar Data Acquisition					
14	DSCC Telemetry Subsystem (DTM) Software					
16	Enhancement & Maintenance of Metric Prediction Software					
27	Advanced Communications Services (ACS) Data Delivery					
28	ACS Monitor & Control (M&C)					
29	M&C X/Server Supt					
30	Network Control Program					
31	Reliable Network Server					
32	ACS TCA Common Svcs					
33	Radio Science					
36	Sec 395 Programming Supt					
43	EIS Sys Admin Supt					
45	Sea Dragon Command Center Test Bed					
46	EIS Tech. Writer					
47	VLBI S/W Engineering					
48	MGSO Doc. Supt.					
49	Duplicating & Dist. Supt.					
50	E-Forms & Inventory					
52	NPP Development Lab					
53	34 Meter Array Development					
54	Galileo CD Technical Writer					
55	TC & DM Test Support					
56	SPC and DMD Implementation					
57	Unix SA					
60	Command Processor Assy					
61	PowerBuilder					
63	HTMT Architecture Supt.					
64	JASON					
65	DS1 Librarian					
GOOD						
WATCH CLOSELY						
IN TROUBLE						

2.1 CWO 01 was closed on 25 Jan 95

2.2 CWO 02 was closed 17 Sep 95

2.3 CWO 03 - Telemetry Simulation Assembly (TSA II)

2.3.1 Performance Status

2.3.1.1 Major Accomplishments

- Youbin Mao has completed the TSA II Version 2 software while waiting for the new AVTEC board to be delivered. Since its delivery, he has been integrating his software with the new board and is in the process of trouble shooting and debugging the initial integration problems.
- Matt Dailey is debugging and fixing Anomaly Reports for the existing software and is writing scripts to convert TSA II version 1 configuration files to version 2 configuration files.
- Shyan-Wee Jao is continuing to work on the TSA Customer board diagnostic software. The REF board control and monitoring software, the DSC board monitoring software and GUI interface software have been completed and successfully demonstrated.

2.3.1.2 Cost/Funds Status

- CWO 3-3 for FY97 is running under budget because Douglas Lam was taken off the Work Order at the customer's request in November of 1996, Youbin Mao went on vacation in December '96 and Mr. Shyan-Wee Jao, a consultant, did not charge the work order from Dec. '96 through Jan '97, Mar. '97 and April 97.

2.3.1.3 Schedule Status

- The software schedule has slipped to accommodate late delivery of the AVETEC board. The schedule is maintained by JPL.

2.3.2 Quality/Config Management

- Idle.

2.3.3 Problems and Proposed Solutions Summary

- None.

2.3.4 Plans

- Complete the installation of the new AVTEC board and continue to integrate the TSA II Version 2 software with the AVTEC board.
- Complete the DSC and BBG diagnostic software.
- Complete the TSA II SOM.
- Continue work on TSA II Anomaly Reports.
- Finish implementation of the new TSA II displays.

2.4 CWO 04 - was closed on 3 Jan 1995.

2.5 CWO 05 - Design Engineering and Logistics Support

- This work order is now defunct as the task has been outsourced to Allied Signal. A contractual action by JPL has been requested to close the CWO.

2.6 CWO 6 - was closed on 17 Sep 95.

2.7 CWO 7 - was closed on 17 Sep 95

2.8 CWO 8 - Section Network/System Administrator

2.8.1 Performance Status

2.8.1.1 Major Accomplishments

- LanRover- Continued to coordinate with Sections 331 and 336 and Pacific Bell regarding moving modem lines from B161-102A to B161-113 sound room. Pacific Bell has run out of phone lines in the area and they have to pull some new lines.
- QuickMail server- The last user has been taken off the QuickMail server. The server has been decommissioned.
- Backup server- Moved backup server function from Mac Ilcx to Quadra 800 formerly used as the QuickMail server. It is a significantly faster machine. Reinitialized hard drive and installed OS 7.6.1 and Retrospect 3.0. Researched, purchased, and installed APS 6 DAT tape mini-drive. It came with Retrospect 3.0. Worked with APS and Dantz to obtain free upgrade to Retrospect 4.0 since it is already shipping. Ran some preliminary tests to see how long it takes to back up all users. Takes roughly 15 hours. I should be able to run everyone in one weekly backup instead of breaking it up into two backups as I have been doing.
- Novell server- JPL-161-SERV continues to have problems running out of disk space. Continued to work with Bob Sniffin and Glenn Dollar to order an upgrade. Gathered dollar commitments and account numbers from managers who are supported by this server. Continued to work with Cassini server support to keep hard drives, particularly the one with the cc:Mail post office, on line.
- Tin Van Dao- Tin continues to have problems with his brand new Gateway. Continued to work with Gateway technical support. He has gone through three network cards and a motherboard. Gateway is sending out a modem. They received a bad batch of modems from US Robotics. They suspect it is the culprit. Continued to work with Sonia Jiminez of Purchasing and James Newton of Shipping to straighten out the paper trail regarding replacement parts.
- Jim Lesh's group- Continued to integrate his new hires and summer hires onto JPL computer network.
- Ray Piereson- Ray is retiring. Helped him wipe all data other than operating system and applications off of his hard drive before his Mac is redeployed to elsewhere on the GLL project.
- Mars Pathfinder- Helped people find a way to keep in touch with various MPF activities. Found a fair reflector for NASA Select TV (Nortel), and an alternative to the VRML plug-in for viewing the monster pan, which doesn't work on Netscape/Mac.

- B161 Secretaries- They received their new PCs. Helped Colleen Tyler transfer her data from her old PC to her new one. Walked through work area with Mardy Wilkins and Yolanda Castillo (section AA.) Made some recommendations as to how to accomodate new equipment. Yolanda will put in to have Westinghouse dividers put in. Secretaries received new LJ5M printer. It was DOA- paper kept jamming. Negotiated with Wareforce to have a replacement unit sent out. Unfortunately, HP is transferring manufacturing to the new 6M model. They repaired a bad sensor and it is OK now.
- Thinnet/Thicknet- Craig Dayman (Sec 336 support) wants to remove the Thinnet running through B161 in Sec 336's area. Bob Sniffin recommended against it, as Thinnet feeds Thicknet which still feeds Electronic Stores.
- Cc:Mail- B161 post office will be shut down by end of August. Notified users to decide whether they want to transfer their e-mail function to institutional cc:Mail or institutional POP/Eudora.
- Plus the usual collection of support calls.

2.8.1.2 Costs/Funds Status

- CWO 8-4 for FY97 is on budget as far as labor hours only but will overrun by \$7k because of the new rate structure.

2.8.1.3 Schedule Status

- This is a LOE support task with no schedule baseline.

2.8.2 Quality/Config Management

- N/A

2.8.3 Problems and Proposed Solutions Summary

- None

2.8.4 Plans

- Continue system and network support.

2.9 CWO 9 - DSCC Tracking Subsystem (DTK) Software: Metric Data Assembly was completed on 15 Sep 96.

2.10 CWO 10 - MPA Enhancements - Automate 26M Operations was completed on 15 Sep 96

2.11 CWO 11 - DSN Multi-Use Software (MSW)

2.11.1 Performance Status

2.11.1.1 Major Accomplishments

- Van Hoang is 60% complete in the code walk through of MSW Year 2000 code inspection. Three noncompliance AR's have been reported so far.
- Greg Ellis has completed the code walk through of SIV Year 2000 code inspection. Two noncompliance AR's have been found and reported for SIV.

- MSW 1.8.4 has been delivered to SPMC. This release contains:
 - Multiple semaphore code changes for SUN and Real/IX.
 - Corrections for the 68040 VxWorks environment.
 - Translator's FAT update corrections.
- The MSW 1.8.4 is a baseline release on the following platforms:
 - SUN Solaris
 - VxWorks (Power PC)
 - VxWorks (68040)
 - VADsWorks
 - Real/IX 68K
 - Real/IX 88K
 - OS/2
- Support was provided by Julie Magallon to the following subsystems:
 - Antenna Pointing Control (APC)
 - Exciter
 - Translator Service
 - Sequential Ranging Assembly (SRA)
- Julie is 90% done updating the MSW SOM.

2.11.1.2 Cost/Funds Status

- CWO 11-7 is going to overrun by 30K because Ms. Julie Magallon service was extended through the end of JPL FY97, Gregory Ellis was hired for 240 hours to support Y2K code inspection and Steve Rockwell was hired to take over the work order. Supplements 11-8 and 11-9 have been submitted and are with PCWO.

2.11.1.3 Schedule Status

- On schedule.

2.11.2 Quality/Config Management

- Performed ISDS CM builds for MSW 1.8.4 on the following platforms: 68K Real/IX (ANSI), 88K Real/IX non-ANSI, VadsWorks, 68K Real/IX non-ANSI, VxWorks, PowerPC, Sun/Solaris 2.5.1, and OS/2. Found errors (build procedures, text, references, directory and file lists, etc.) introduced in the past few MSW RDDs delivered to SPMC in the past 7-8 months. Drafted the MSW 1.8.4 RDD Volumes I and II (for internal ISDS review, i.e., Julie Magallon). MSW 1.8.4 delivered to SPMC on 7/14. Began looking into problems with the SIV 1.4.0 software delivered to SPMC in January 1997.

2.11.3 Problems and Proposed Solutions Summary

- None.

2.11.4 Plans

- Continue with MSW Year 2000 code inspection.
- Complete MSW SOM and release it through SPMC.
- Train Steve Rockwell who will be the new MSW CDE.

2.12 CWO 12 - was closed on 17 Sep 95

2.13 CWO 13 - Goldstone Solar System Radar Data Acquisition System Design and Integration

2.13.1 Performance Status

2.13.1.1 Major Accomplishments

- CW mode has been tested with the BLK V RCVR and is operating. This includes spectrum displays on the GSSR user interface.
- GSSR GUI now includes full control of correlator/accumulator boards.
- Assembled first production daughter board.

2.13.1.2 Cost/Funds Status

- CWO 13-6 for FY97 is under budget by \$62k because 1) ODCs of 18K for production of correlator boards has being shifted out to Aug '97 and 2) anticipated labor hours are lower by 675 hrs to be used between Aug'97 and end of Fiscal year.

2.13.1.3 Schedule Status

- Tasks are on schedule - See attachment.

2.13.2 Quality/Config Management

- N/A.

2.13.3 Problems and Proposed Solutions Summary

- None.

2.13.4 Plans

- Continue integration test with BLK V RCVR Assemble 20 production boards.
- Continue with PN coder design.

2.14 CWO 14 - DSCC Telemetry Subsystem (DTM) Software

2.14.1 Performance Status

2.14.1.1 Major Accomplishments

- TCA green build version 10.3.4 with the latest kernel (2.0.1g) was built and is being tested at DTF 21 & in 525 lab.

- Assisted in debugging the VxWorks & Board Support Package device drivers problems that may relate to the current TCA Mailbox corruption problems.
- Configured, debugged and tested the format table code for the new AXAF mission.
- Completed the detailed design phase for ECR 96.0041, the TGC Warm Start Capability. Started coding the modifications required in the TGC code.
- Assisted station operators and Jim Matlock, the OSE, in solving telemetry problems and in redelivering updated configuration files through the NSS.
- Began software design on ECR 96.0054, NSS-DTM Tables.

2.14.1.2 Cost/Funds Status

- CWO 14-7 is under funded due to the addition of Michael Dern to the Telemetry team in July, August and September, at the request of the customer. CWO supplement 14-9 will be submitted to JPL immediately.

2.14.1.3 Schedule Status

- See Attached Schedule.

2.14.2 Quality/Config Management

- Tried to determine what happened to TCA software and RDDs delivered to SPMC during the past few months (Some versions were placed in different areas on 'kelvin' using inconsistent naming schemes, others were missing - initial inspection indicated many errors in the documentation).

2.14.3 Problems and Proposed Solutions Summary

- Current anomalies include possible data corruption problems, Mailbox corruption problems, TCA task hang-ups and board hang-ups. These anomalies have been traced to vendor software and hardware. Radstone, the hardware vendor, has been working with the telemetry team to solve these problems.

2.14.4 Plans

- Continue working on ECR 96.0041, the TGC Warm Start Capability.
- Continue testing AXAF format table code and make an engineering delivery by the end of the month.
- Continue to support the engineers debugging the current anomalies.
- Start work on ECR 96.0044 (Automatic Support Data File).

2.15 CWO 15 - Alaska SAR Facility Product Verification Subsystem Processor S/W

2.15.1 Performance Status

2.15.1.1 Major Accomplishments

- This CWO was inactive this month at the request of the customer.

2.15.1.2 Cost/Funds Status

- CWO 15-3 is significantly under budget because two personnel have been moved off this CWO and not replaced. We are interested in replacing this personnel but, to date, JPL has not indicated any immediate need.

2.15.1.3 Schedule Status

- On Schedule.

2.15.2 Quality/Config Management

- Idle.

2.15.3 Problems and Proposed Solutions Summary

- None

2.15.4 Plans

- None.

2.16 CWO 16 - Enhancement & Maintenance of Metric Prediction Software

2.16.1 Performance Status

2.16.2 Major Accomplishments

- Design and preliminary code for geocentric to topocentric coordinate conversion, atmospheric parallax correction, angular coordinates (azimuth/elevation) to rectangular coordinates and vice versa, dynamic stepsize calculation, triggerfile processing
- Developed an algorithm for increasing the likelihood of aligning step boundaries with events.
- Adapted the input processing developed for the sssm wfm interface for predict processing,
- Build a spread sheet in Excel to generate expected testing output (cablewrap) given certain antenna positions.
- Build a C++ wrapper around the back end BIF routines used to generate binary predict files.
- Customized the stapar files for use by Antgen.
- Finished design and preliminary code of Antgen functionality. Compiled all files and prepared them for design walkthrough on 8/29/97.
- Completed reworking the SSSM makefiles to allow building with the WFA software, to remove absolute file names, and to streamline them for actual production. Presented the new design during the weekly meeting of the Predict Services Group.

2.16.2.1 Cost/Funds Status

- CWO 16-7 is on budget.

2.16.2.2 Schedule Status

- Schedule maintained by JPL.

2.16.3 Quality/Config Management

- N/A.

2.16.4 Problems and Proposed Solutions Summary

- None.

2.16.5 Plans

- Design review. Unit testing. Integration testing. Validation of NPP Antgen by comparing output to NSS Antgen.
- Delivery of the reworked of SSSM build procedures.
- Expansion of the "link" class to include functionality of the NSS GET_LT package, and possibly the GET_DL package as well, to facilitate NPP/MPG Frequency Prediction Generators development.

2.17 CWO 17 - GCF Interface (GIF)

2.17.1 Performance Status

- Mr. David Haupt, hired as a consultant, is supporting:
 - the development and unit test of a global set of GIF data block conversion libraries,
 - standalone interface program for processing CDR IDR files,
 - outputting converted data to TCDM standard core services,
 - and new input and output interface to FTDD services effort, scheduled to complete September 21, 1997.

This support includes adding new capabilities, failure report correction, change request implementation, and documentation updating prior to delivery to AMMOS configuration control.

2.17.1.1 Major Accomplishments

- No support was provided during the month of July.

2.17.1.2 Cost/Funds Status

- CWO 17-3 has been extended through the end of JPL FY97 and funding has been increased. Mr. Haupt did not work in June and July.

2.17.1.3 Schedule Status

- Schedule is maintained by JPL.

2.17.2 Quality/Config Management

- N/A.

2.17.3 Problems and Proposed Solutions Summary

- None.

2.17.4 Plans

- Continue work on GIF Status Broadcasting and Logging of Unrecognized Blocks Failure Reports.

2.18 CWO 18 - was closed on 17 Sep 95

2.19 CWO 19 - was closed on 17 Sep 95

2.20 CWO 20 - was closed on 29 Dec 95

2.21 CWO 21 - was closed on 17 Sep 95

2.22 CWO 22 - was closed on 7 Mar 95

2.23 CWO 23 - was closed on 17 Sep 95

2.24 CWO 24 - was closed on 18 Sep 95

2.25 CWO 25 - was closed on 31 Oct 95

2.26 CWO 26- was closed on 5 Dec 95

2.27 CWO 27- Advanced Communications Services (ACS) Data Delivery

2.27.1 Performance Status

2.27.1.1 Major Accomplishments

- Brian Schladen, an ISDS consultant, is supporting this work order on a part time basis. This month he performed the following tasks in support of this work order:
 - Special Function Gateway (SFG) Provided telephone support for SFG operational problems.

2.27.1.2 Status Schedule

- Schedule maintained by JPL.

2.27.1.3 Cost/Funds Status

- CWO 27-2 is going to be under budget by 132K due to Wayne Tung and Chris Yung leaving ISDS and not being replaced on the work order by the JPL customer.

2.27.2 Quality/Config Management

- Idle.

2.27.3 Problems and Proposed Solutions Summary

- None

2.27.4 Plans

- Brian Schladen will continue to support SFG, RNS, GMP and CDR on a part time basis.

2.28 CWO 28- Advanced Communications Services (ACS) Monitor & Control

2.28.1 Performance Status

2.28.1.1 Major Accomplishments

- GCF Monitor and Control Program (GMP):
- Continued to support GMP/GMP workstation in soak.
- Developed and testing an operability enhancement to GMP's automatic handling of SFG's serial communication channels.

2.28.1.2 Cost/Funds Status

- CWO 28 -2 for FY97 is going to be under budget by 16K due to Stan Mak leaving ISDS and not being replaced on the work order by the JPL customer.

2.28.1.3 Schedule Status

- Schedule maintained by JPL.

2.28.2 Quality/Config Management

- Idle.

2.28.3 Problems and Proposed Solutions Summary

- There is a problem printing from the new GMP's. Sun does have "good-for-this- release-of-the-OS" only patch to enable our current NewSprint package. Eric Barkely is currently lobbying to get a (TCP/IP) network printer installed at the CCT, as this is the better long-term solution.

2.28.4 Plans

- Continue to support GMP workstation in soak.
- Determine which option JPL would like to pursue in resolving the printer problem for the GMP workstations.

2.29 CWO 29 - Network Monitor & Control Trans/Server Support

- CWO 29 is a Cat A position with requirements for support coordinated, but not directly managed by ISDS. Mr. Jay Cai has been working under this CWO as a consultant. No support was provided during the month of July.
- No work has been performed under this CWO from April through July. If no additional requests for support are made, it will underrun by 2k by fiscal year end.

2.30 CWO 30 - Network Control Program Common Services

2.30.1 Performance Status

2.30.1.1 Major Accomplishments

- Delivered MCIS 1.1.3 to CS CM.
- Worked on COTS:
 - which machines need what
 - location (local disk, NFS, DFS, AFS)

- installation instructions and scripts
- Reviewed CS Delivery 2 items.
- Set up accounts for transition of MSW from Julie Magallon to Steve Rockwell.
- Revised SCF STP-2 per OSE's requests from AT.
- Attended DSN Software Reuse meeting.
- Updated CS Delivery 2 items list.
- Made a preliminary, partial run-through of the MCIS AT.
- Began implementation of the functions specified in the SCF OD Registry Preliminary User's Guide.

2.30.1.2 Cost/Funds Status

- CWO 30 is currently under budget. A request has been submitted to purchase upgrade components for "Donald," a Sun Ultra 2. If this request is approved, CWO 30 will be on budget.

2.30.1.3 Schedule Status

- NCP CS is on schedule. The current schedule needs updating to accommodate, as yet undefined, requirements for FY98 and Delivery 2. No current schedule is available.

2.30.2 Quality/Config Management

- Processed ISDSCM build for NCP's Common Services CATA 1.0.3, then delivered this to SPMC (7/7).
- Performed the ISDSCM build for NCP's Common Services SCF 1.0.2, then delivered this to SPMC (7/18).

2.30.3 Problems and Proposed Solutions Summary

None.

2.30.4 Plans

- Continue implementation of functions specified in the SCF OD Registry Preliminary User's Guide.
- Explore implementations of DCE-based server monitoring and DCE credentials monitoring.
- Visit Kennedy Space Center on 8/14 to check MIL71 installation of NCP equipment.

2.31 CWO 31 - ACS RNS CS

2.31.1 Performance Status

2.31.1.1 Major Accomplishments

- This work order was inactive this month because Michael Dern supported CWO-14 during the month of July.

2.31.1.2 Cost/Funds Status

- CWO 31 is on budget.

2.31.1.3 Schedule Status

- On Schedule.

2.31.2 Quality/Config Management

- Idle.

2.31.3 Problems and Proposed Solutions Summary

- None.

2.31.4 Plans

- Continue to support CWO-14 through the end of the fiscal year.

2.32 CWO 32 - ACS TCA Common Services

2.32.1 Performance Status

2.32.1.1 Major Accomplishment

- This CWO was inactive this month.

2.32.1.2 Cost Funds Status

- CWO 32-2 For FY97 is on budget.

2.32.1.3 Schedule Status

- On Schedule.

2.32.2 Quality/Config Management

- Idle.

2.32.3 Problems & Proposed Solutions Summary

- None.

2.32.4 Plans

- Support the TCA / FTDD integration effort as needed.

2.33 CWO 33 - DSCC Radio Science Communications Processor (RSCP) Software

2.33.1 Performance Status

2.33.1.1 Major Accomplishment

- Completed coding and engineering tests of the RSCP operational software, OP-D, version 410 for Radio Science Closed Loop Control project.
- Prepared and submitted Radio Science documents, Software Operator Manual and Release Description Document, for OP-D version 400 to SPMC.
- Completed the Network Monitor and Control Subsystem (NMC) and DSCC Spectrum Processing Radio Science interface, MON5-103A. The interface is in the signature cycle phase.

2.33.1.2 Cost Funds Status

- CWO 33-2 For FY97 is going to overrun by 5k due to additional hours required by the Radio Science CDE required to meet the customer requirements. A supplement will be submitted to cover these costs.

2.33.1.3 Schedule Status

- The schedule for this CWO is maintained by JPL.

2.33.2 Quality/Config Management

- Idle.

2.33.3 Problems & Proposed Solutions Summary

- None.

2.33.4 Plans

- Continue work on the remaining Radio Science documents.

2.34 CWO 34 - Alaska SAR Programming Support was complete 15 Sep 96

2.35 CWO 35 - Never Placed On Contract

2.36 CWO 36 - Section 395 Programming Support

2.36.1 Performance Status

2.36.1.1 Major Accomplishment

- Completed V3.2 Testing July 18 (Delivery on July 22)
- Completed V3.2 Delta 1 Testing July 22 (Delivery on July 23)
- Completed V3.2 Delta 2 Testing July 23 (Delivery on July 24)
- Completed V3.2 Delta 3 Testing August 1 (Delivery same day)

2.36.1.2 Cost Funds Status

- CWO 36 -1 For FY97 is on budget.

2.36.1.3 Schedule Status

- The schedule is maintained by JPL.

2.36.2 Quality/Config Management

- Ongoing.

2.36.3 Problems & Proposed Solutions Summary

- None.

2.36.4 Plans

- Begin Planning V4.0 Testing

2.37 CWO 37 - Work Order Processing System (Section 644) - Closed 4 October 96

2.38 CWO 38 - Schedule, Estimating, Tracking System (SETS) (Section 644)

- A contractual action is required by JPL to close this CWO.

2.39 CWO 39 - SPMC Configuration Management Support

2.39.1 Performance Status

- After six months half-time and nine months full-time at SPMC, Gary Oye returned to the ISDS Team on Monday, June 30th. He remains "on call" with SPMC through the month of July, supporting them on an "as-needed" basis. He is answering questions by phone and email about the On-Line System (build requests, program IDs, software copy requests, archive requests), missing software, network connection problems, overseas transfer, SIV/MSW/890-201, and DSN On-Line Software Library (DOSL).

2.39.1.1 Major Accomplishment

- Performed the TCA 10.3.4 build for SPMC, building MSW, 890-201/PPC, FCS, GACC, then TCA for VxWorks, and TCA for PDOS (7/16). Worked with Chris Leng on processes required to complete DOSL. Performed the SCF 1.0.2 build at SPMC and installed software on DFS; was called in for this emergency request as Susie Fowler was out for the day, and Allied had not made plans otherwise (7/18).
- Began training Allied's Marlyn on SPMC processes. Cleaned up SPMC's DSN software source code stored on 'durango', which had doubled in size and been split across multiple disks during the past six months. Phased out "old" DOSL DSN software on 'durango' as a new "baseline" is being set up on the DOSL "server" ('wombat'). Performed the SPMC build of the NMC TS software. Went to the Lab (7/29) to help Susie and Marlyn with OVLBI and AMT. Responded to a call from Keith Williams regarding the "soak" process for Allied's ISO 9000 certification (perhaps out-of-scope for ISDS CM support of SPMC). Located copies of Radio Science RDDs for Scott Bryant, and other program RDDs for Chris Leng. Migrated NCP software to DFS for SPMC (NMC's CE, GCE, UI and TS).

2.39.1.2 Cost Funds Status

- CWO 39-2 has been extended and funding has been increase.

2.39.1.3 Schedule Status

- This is an LOE support task.

2.39.2 Quality/Config Management

- NA

2.39.3 Problems & Proposed Solutions Summary

- None.

2.39.4 Plans

- Continue support until budget runs out.

2.40 CWO 40 - Network Operations Control Center Support was closed Feb 97.

2.41 CWO 41 - ISDS Additional Tasks was complete 15 Sep 96.

2.42 CWO 42 - Arrayed Doppler - PCWO canceled

2.43 CWO 43 - System Admin Support to EIS

2.43.1 Major Accomplishment

Cassini Devnet:

- Moved NIS slave server from ulo15 to dcs21.
- Moved print spoolers off and decommissioned ulo15.
- Installed MGSO_SEQ V22.3.
- Increased anon-ftp timeout on dcs01 for July 9 OVT.
- Installed HP-UX 10.20 on new J282, fso03.
- Fixed rto03 external disk connection problem.
- Attended DCS Staff Meetings, MSO DCM and SA Group meetings.
- Updated documentation and Web page as needed.

MSAS:

- Fixed TRASYS symlink problem.
- Performed MSAS updates as requested.

SOPCs:

- Rebooted all SOPCs for Marc Sarrel.
- Changed login shell for Diane Conner.
- Removed obsolete SA accounts, added Scott Dayman.
- Deactivated tftp where active.
- Updated list of TCP log recipients.
- Provided rto ACE accounts.
- Created casuvis group account.
- Installed MGSO D4.1L on all sites.

Routers:

- Helped troubleshoot CDA router problems.
- Saved CDA router config to workstation before HW fix.
- Helped reconfigure CDA router after serial board replaced.

Non-Devnet:

- Installed AFS for Candy Hansen and answered questions.
- Fixed Candy Hansen's disappearing console window.

- Provided documentation to Pam Ray on Solaris disk arrays.

2.43.2 Cost Funds Status

- CWO 43 is on budget.

2.44 CWO 44 - DCE Cell Design Consultation was complete in April 97

2.45 CWO 45 - Sea Dragon Command Center Test Bed

2.45.1 Performance Status

On 22 August, Michael Guadarrama resigned with no notice and took a job with Telos doing the same work for the same customer, for an increase in salary.

2.45.1.1 Major Accomplishment

- Fully implemented new user profile security model into Korea system.
- Updated USFK briefing system based on mods requested by users.
- Developed Booch model and design pattern for USFK security.
- Examined OrbixWeb, Verisign, and Netscape implementations of CORBA 2.0 for suitability for CWL task. And wrote sample Java apps to investigate Java functionality with CORBA.

2.45.1.2 Cost Funds Status

- CWO 45-1 is on budget.

2.45.1.3 Schedule Status

- Schedule being maintained by JPL.

2.45.2 Quality/Config Management

- Idle.

2.45.3 Problems & Proposed Solutions Summary

- We need to obtain a clear object model from the Object Working group at CWL. There are a many variables, such fault tolerance, function interaction, that are captured in the model which will impact the our architecture. Other members of the CWL group are working on solving this problem.

2.45.4 Plans

- Continue current work on CWL.

2.46 CWO 46 - EIS File Service Technical Writer

2.46.1 Performance Status

- The new EIS website was finally released July 10. Prior to release, the old site was coded to put users on the new one when using the old URLs.
- All forms on the new site were cut down to bare essentials and now most fit on one screen. Also, the AFS User guide was made a separate area, and the top level choice changed to simply "User Guides."

2.46.1.1 Major Accomplishments

- Release of the new website with all its enhancements.

2.46.1.2 Cost/Funds Status

- For FY97 is on budget.

2.46.1.3 Schedule Status

- The release of the website was delayed, first because of testing, and then because of the Pathfinder network freeze. This did allow time for further improvements. The new site has been ready to go whenever upper management says the word. Current plans are for July 9.

2.46.2 Quality/Config Management

- Revision control is in place.

2.46.3 Problems and Proposed Solutions Summary

- None.

2.46.4 Plans

- In August the assigned technical writer will be taking two weeks leave. E-mail tracking and other EIS-FIL work will be performed on an "as needed" basis. DFS documentation will be generated and added this fall to prepare for the implementation of the new distributed file system..

2.47 CWO 47 - VLBI Project Software Engineer

2.47.1 Performance Status

- Worked on tcfgn and subroutines for tcfgn. Wrote new functions, added more functionality and continued cleaning up existing legacy software, and started system documentation.

2.47.1.1 Major Accomplishments

- Got program which automatically generates cross-references to code and produces text and html (cxref) working. Ran all code through cref.
- Got stringent C checker program (lclint) that finds possible bugs, bad coding practices, etc., working. Ran all code through lclint.
- Did performance evaluation of upgraded sparc 5 system.

2.47.1.2 Cost/Funds Status

- This CWO is on budget.

2.47.1.3 Schedule Status

- Schedule is maintained by JPL.

2.47.2 Quality/Config Management

- All the software is under version control using cvs.
- Some module tests, some test cases used for quality control.

2.47.3 Problems and Proposed Solutions Summary

- None.

2.47.4 Plans

- Continue to enhance tcfgen and clean up source code and documentation.

2.48 CWO 48 - MGSO Documentation Technical Support

2.48.1 Performance Status

Version 22.2:

- All documentation complete.

Version 22.3:

- *Cassini High Speed Simulator* [Acceptance Test Plan, Test Plan/Test Specification, User Guide].
 - These documents have been placed on hold due to discrepancies in context.
- SEQ Test Plan
 - Received from library and final distribution sent out.
- SEQ Test Specification
 - Signature cycle complete. Prepared document for submission to library. Submitted hardcopy and electronic copy to library.
- Work Implementation Plan
 - Received from library and final distribution sent out.
- Work Implementation Plan Revision A
 - Received from library and final distribution sent out.

Version 22.4

- This point build has been canceled.

Version 23

- Created new schedule for 34 documents on an Excel spreadsheet and sent it out for review. Began to coordinate with MGSO library for document numbers.

TAS Documents

- Acceptance Test Plan Rev. A.
 - Received from library and final distribution sent out.
- TAS RDD
 - This document continues to be on hold due to delays in receiving sections that are missing.

SIS Module Project [Context Variable Definition File, Conditions File, MASK File]

- The above three documents have been reformatted to Word 7. Table of Contents recreated. Hardcopy printed and electronic copy saved to disk.

General

- Prepared and distributed the Planning and Sequencing Document Tracking Status Report for Version 22.2, Version 22.3, Version 23, and TAS Documents.
- Met with MGSO Librarian to obtain document numbers and histories needed for documents and to submit documents.

2.48.1.1 Major Accomplishments

- Version 22.2 completed.

2.48.1.2 Cost/Funds Status

- On budget.

2.48.1.3 Schedule Status

- Schedule is maintained by JPL.

2.48.2 Quality/Config Management

- All documents are under version control.

2.48.3 Problems and Proposed Solutions Summary

- Need to complete TAS RDD. The System Engineer is aware of the problem and has taken action to get this resolved, but this hasn't been resolved as of this writing.

2.48.4 Plans

- To continue progress with Version 22.3, 23, and TAS, continue with SIS Modules Project, and continue with preparations for completion of CWO 48.

2.49 CWO 49 Duplicating and Distribution Support

2.49.1 Performance Status

2.49.1.1 Major Accomplishments

- The Serial Management and Renewal Tracking System was completed and ready for demonstration to the Library.

2.49.1.2 Cost Funds Status

- This CWO will be under funded by 6K if the current staff spends full time supporting this CWO as originally estimated.

2.49.1.3 Schedule Status

- Schedule Maintained by JPL.

2.49.2 Quality/Config Management

- N/A.

2.49.3 Problems and Proposed Solutions Summary

- N/A.

2.49.4 Plans

- Continue software development, day-to-day information technology support, Help Desk and Division 64 support as required.

2.50 CWO 50 Electronic Forms and Inventory

2.50.1 Performance

Forms Management

- Revised the draft Functional Design Document for the Forms Management System to incorporate reviewer's comments. Completed the first cut of the Forms Management System (FMS) User Interface and Data Interface. COTS Revision Control software has been identified for incorporation into FMS.
- Continued to respond and help users on FormFlow. The number for this month was approximately 130 calls. The calls concerned using forms, databases, how to download, installing the software. etc. The primary cause of increased activity was the announcement of the new travel forms.

Inventory Maintenance

- Weekly maintenance and backup of the portion of the Inventory Control System that resides on the IBM 8130 continued. Created a copy of data fields from the mainframe Inventory system. This is the second request of many expected from the NBS folks.

2.50.1.1 Major Accomplishments

- Completed upgrade of the Form Services Application to FormFlow 2.1.

2.50.1.2 Cost Funds Status

- This CWO is on budget.

2.50.1.3 Schedule Status

Forms Management

- The project schedule has been revamped to reflect the details of the FMS development and a targeted date in September for demonstration of FMS established. The changes do not materially affect the original plan, and the project is currently on target. This schedule is maintained by JPL.

Inventory Maintenance

- There is no schedule associated with this support.

2.50.2 Quality/Config Management

- N/A.

2.50.3 Problems and Proposed Solutions Summary

- The IBM 8130 inventory system had a diskette drive failure that required a new motor. This made the routine system backups impossible until it was repaired. Maintainability of the current hardware,

specifically spare parts no longer available because of system obsolescence, makes critical the implementation of the NBS version of the inventory system while the current system is still operational.

2.50.4 Plans

- Continue development of FMS, add requested changes and report to FSA, and provide user and inventory system support as required.

2.51 CWO 51 Physical Oceanography Distributed Archive Center was complete Jan 97.

2.52 CWO 52 NPP Development Lab was complete 4 July 97

2.53 CWO 53 - 34 Meter Array Development Support

2.53.1 Performance Status

2.53.1.1 Major Accomplishments

- Analyzed detailed requirements for 34-meter arraying subsystem. Developing test cases, identifying which tests can be conducted at the three test sites, Bldg 11, DTF-21, and Goldstone.
- Worked with the development team on detailed design issues.

2.53.1.2 Cost Funds Status

- This CWO is going under run by 18K. Ron Holden did not transition to the program as soon as expected.

2.53.1.3 Schedule Status

- On Schedule.

2.53.2 Quality/Config Management

- Idle.

2.53.3 Problems and Proposed Solutions Summary

- None.

2.53.4 Plans

- Continue with this month's activities.
- Begin drafting SITP-1 document.

2.54 CWO 54 - Galileo CDRom Technical Writer

2.54.1 Performance Status

- This work order has been extended to the end of the fiscal year. The last section for "Extended Launchpad" was turned in, covering the beginning tour. Work on the "Extended Museum" section has begun.

2.54.1.1 Major Accomplishments

- Completion of the “Extended Launchpad” section.

2.54.1.2 Cost Funds Status

- This CWO has been extended through the end of fiscal year with no additional funding needed.

2.54.1.3 Schedule Status

- The schedule maintained by the project. At the request of the project, the technical writer will be devoting more hours per week than originally scheduled. All schedules have been met to date.

2.54.2 Quality/Config Management

- N/A.

2.54.3 Problems and Proposed Solutions Summary

- None.

2.54.4 Plans

- Continue developing the document.

2.55 CWO 55 - TC and DM Test Support

2.55.1 Performance Status

- The assigned software engineer continued development of regression tests for the Telemetry Input system (TIS) V22.4 and 23.0.
- Started testing 2 new Change Requests (cr) and 4 new Anomaly Reports (ar).
- Continued testing 2 TIS projects (TIS), 1 cr and 2 ar's.

2.55.1.1 Major Accomplishments

- Added one CR and four AR's. Completed testing 2 CR's and 7 AR's.
- Completed automating fourteen of the fifteen Software Requirements Documents that Voyager has for both the SunOS and Solaris platforms.

2.55.1.2 Cost Funds Status

- This CWO is on budget.

2.55.1.3 Schedule Status

- On schedule for version builds.

2.55.2 Quality/Config Management

- N/A.

2.55.3 Problems and Proposed Solutions Summary

- None.

2.55.4 Plans

- Continue to automate Voyager, and start testing TIS for Version 23.0.

2.56 CWO 56 - SPC and DMD Implementation

2.56.1 Performance Status

PLASMACAL

- The structure and update procedures for intermediate files are being defined. The program set and processing steps to be used during construction of the range calibrations has been produced, and initial processing algorithms for production of “roll your own” DRVID range calibration calculations are being developed.

DMD-GPS project (to be finished by fiscal 1997)

- The monitoring system was ported to a DEC Alpha computer and tested. Specifications and documentation for the system were prepared.

DMD-NMC interface (scheduled for fiscal 1998)

- Began research to determine DMD-NMC interface requirements and research of supporting software available.

Frequency and Timing Subsystem (FTS)

- Started investigation of FTS function requirements and technical issues.

2.56.1.1 Major Accomplishments

DMD-GPS project

- Tested the existing <gps> program and diagnosed potential problems.
- Analyzed requirements, developed specifications and documentation.

2.56.1.2 Cost Funds Status

- This CWO is on budget.

2.56.1.3 Schedule Status

- Schedule maintained by JPL.

2.56.2 Quality/Config Management

- Continuing to get oriented to existing software and documentation.

2.56.3 Problems and Proposed Solutions Summary

PLASMACAL

- Understanding the significance and reliability of some of the SPR file items along with a lack of documentation has affected the development process. Meetings with knowledgeable personnel are helping with this problem.

2.56.4 Plans

PLASMACAL

- Implement first cut of plasma calibration production for pseudo-DRVID and DRVID data, and use the resulting implementation on existing SPR files to check implementation and gain experience with “live” data.
- Begin implementation of “roll your own” DRVID calculations.

DMD Monitor

- Detailed design and coding of final version.

FTS

- Participate in the architectural and functional design

2.57 CWO 57 – Unix System Administration Support

- This support task was inactive this month.

2.58 CWO 58 – MSW AMT to AMC, Never place on contract

- Although this CWO was never place on contract, \$9K of cost was incurred (at the customer’s request) in direct charges by Ms. Ravichantiara.

2.59 CWO 59 – Antenna Sim Lab Support was complete in June 97

2.60 CWO 60 – Command Processor Assembly S/W Supt.

2.60.1 Performance Status

2.60.1.1 Major Accomplishments

- Completed work on storing multiple project tables on CPA system.

2.60.1.2 Cost/Funds Status

- Paperwork for CWO is in JPL contracts

2.60.1.3 Schedule Status

- Schedule being maintained by JPL

2.60.2 Quality/Config Management

- Idle.

2.60.3 Problems and Proposed Solutions Summary

- None.

2.60.4 Plans

- Working on code to receive project tables from MPP and read tables from floppy disk.

2.61 CWO 61 - CMIS Migration to PowerBuilder

2.61.1 Performance Status

- In response to a request to prepare a cost, workforce and schedule from Section 311, technical interchange meetings were held, documentation and software samples of the existing FoxPro CMIS were secured, and Project Definition Documents (PDD's) for the Budget Change Request System (BCRS), Electronic Change Management System (ECMS) and Action Item Tracking System (AITS) were prepared and submitted. At the customer's request, revisions were made to the BCRS and ECMS PDD's which were resubmitted for approval. The customer requested a final revision to the BCRS PDD and indicated that ISDS would be tasked to perform the BCRS migration to PowerBuilder.

2.61.1.1 Major Accomplishments

- Prepared PDD's for Section 311.

2.61.1.2 Cost/Funds Status

- Paperwork is with JPL contracts.

2.61.1.3 Schedule Status

- Proposed schedule submitted with PDD.

2.61.2 Quality/Config Management

- N/A.

2.61.3 Problems and Proposed Solutions Summary

- N/A.

2.61.4 Plans

- Proceed with BCRS project when approved.

2.62 SAIRAS97

2.63 HTMT

2.64 CWO 64 - JASON/TOPEX

2.64.1 Performance Status

Per assignment from Anil Agrawal of JPL, Daniel Zink worked on several maintenance tasks for TOPEX. These included:

- Correcting file access to allow multiple users simultaneous access of the TOPEX Telemetry, Command and Communication (TCC) time correlation file.
- Correcting a problem with managing locks and delivery of asynchronous system traps (AST's) that caused the application to freeze in certain circumstances.
- Adding code to log the attempted destination when servers send messages to other processes that are undeliverable.
- Tracked down and corrected a problem with memory management which caused seemingly random aborts and errors within the user interface program.

2.64.1.1 Major Accomplishments

- None.

2.64.1.2 Cost/Funds Status

- This CWO will underrun because Youbin Mao's support to the project has been delayed past August 97.

2.64.1.3 Schedule Status

- The schedule is maintained by JPL.

2.64.2 Problems and Proposed Solutions Summary

- Continue JASON requirements development.

2.64.3 Quality/Config Management

- N/A.

2.64.4 Plans

2.65 CWO 65 - DS1 Librarian

2.65.1 Performance Status

2.65.1.1 Major Accomplishments

- DS1 Library established.

2.65.1.2 Cost/Funds Status

2.65.1.3 Schedule Status

- N/A

2.65.2 Quality/Config Management

- N/A.

2.65.3 Problems and Proposed Solutions Summary

- None

2.65.4 Plans

- Continue to populate DS1 Library with documents and service users.

3. Contract Cost Status

3.1 NASA Form 533M/Q

“A NASA Form 533M report shall be completed in accordance with the instructions on the reverse side of the form. A 533M shall be prepared for the total contract and for each CWO and for each CWO Level 2 WBS Item or below, as mutually agreed upon during negotiations. Reporting categories on each 533M shall be the elements of cost (e.g., labor hours, labor dollars, overhead costs, material, subcontracts, other direct costs, G&A) and profit or fee. A NASA Form 533Q shall be completed in accordance with the instructions on the reverse side of the form. Reporting levels and categories shall be the same as those required for the 533M.”

3.1.1 General

All CWOs are on contract with the following exceptions: CWO 59-66.

DCAA has signed off on new provisional billing rates, making last month's unofficial rates now official (Appendix 7).

3.1.2 Reports

The following reports are included in this month's deliverable.

3.1.2.1 NASA 533M - JPL FY 1997 (Appendix 2)

The attached NASA 533M report is for the Infotec Development, Inc. accounting period Sept. 21, 1997 to accommodate JPL FY97. As agreed at the 11 September 1995 CWO/Cost Management meeting with JPL, the ISDS Team is reporting only the current JPL fiscal year (1997) data in the NASA 533. A summary report has been included that shows total costs to date by CWO. The September 1995 Monthly Activity Report (MA006) contains all JPL FY95 year-end cost data detail.

Also per agreement at the 11 September 1995 CWO/Cost Management meeting, we are reporting the latest received negotiated estimate for each CWO in the last column of the NASA 533.

Per JPL request, the Contract Value Cost summary on the NASA 533 reflects the total negotiated costs (last column) of all CWOs for JPL FY97 only. Since CWOs are used by JPL to establish funding and are based on latest revised cost estimates (actual costs plus estimate to complete), CWOs clearly do not track changes only in scope or original baseline estimates. ISDS attempts to maintain individual CWO Contract Values (2nd to last column) internally as baseline target costs. The ISDS Microframe cost management system is designed for building these baseline estimates “bottoms up” and can only be revised easily for changes in scope. Due to the following reasons, CWO baselines are becoming more difficult to maintain and are resulting in less meaningful individual CWO Contract Values.

- Most CWO efforts are not task-driven, since the period of performance for most CWOs starts and ends commensurate with the JPL fiscal year. It is difficult to maintain a target cost associated with the task, when the task may continuously change to fit the period of performance.
- The staffing for most CWOs are level of effort. Deltas in past labor costs are often attributed to a combination of scope, staffing, personnel rate, and requirement changes. Since CWO Supplements

are based on the total latest revised estimate, it is often difficult to determine the portion of cost associated with a baseline change and over/underun.

- Our JPL technical customers are often very involved in the staffing process. When personnel changes result in cost deltas, it is often unclear whether the baseline Contract Value should be changed.

The Contract Value Fee summary header reflects the total fee pool established by negotiated CWOs. The Fund Limitation is the total of all individual CWO funding for JPL FY97. Since some CWO's may be partially funded, or funded only for PCWO effort, this amount may differ from the sum of the Contract Value Cost and Fee.

Billing values are totals from ISDS contract inception through the reporting date.

3.1.2.2 NASA 533Q - JPL FY 1997

Appendix

3.1.2.3 Monthly Whole Hours/Dollars Report - JPL FY 1997(Appendix 3)

This report depicts monthly and cumulative whole hours and whole dollar cost estimates associated with each CWO. *It is based only on JPL FY 97 CWO effort.*

3.1.2.4 ISDS Cumulative Costs - From Contract Inception (Appendix 4)

This report summarizes cumulative actual costs and total latest revised estimates from inception of the contract, including JPL FY 95, 96 and 97 effort. It is provided per agreement at the 11 September 1995 CWO/Cost Management meeting with JPL and per NASA Handbook 9501.2B (Procedures for Contractor Reporting of Correlated Cost and Performance Data) Section 301, Paragraph 4b (10).

3.1.2.5 ISDS Personnel Allocation (Appendix 5)

This report is provided per request of JPL. It depicts the current approximate allocation of each ISDS employee to each CWO, at the end of the reporting month. This table only illustrates the association of an employee to a CWO and does not reflect equivalent man-months budgeted, percentage of the month actually worked, or any vacation/sick time.

3.1.2.6 CWO Funding Projections (Appendix 6)

This table projects the date that current CWO funding expires, if prior to the end of the period of performance. It also identifies whether 75% of funding will be reached within the next 30 or 60 days, for purposes of the contract funding limitation clause.

3.1.3 Subcontractor Costs

Subcontractor costs reported in November are based on CSC November period of performance costs reported by the CSC Program Management Office (PMO). NASA 533 subcontractor costs are stated in dollars that include CSC overhead and G&A. The overhead and G&A summaries on the NASA 533 depict IDI burdening on all elements of cost.

3.2 Overhead Report

"An overhead report shall provide a listing of the latest bidding, billing and actual overhead and G&A rates by cost centers. The fiscal year calendar shall also be included."

Attached as **Appendix 7** is the draft letter from the Defense Contract Audit Agency (DCAA), stating the ISDS provisional billing rates (see JPL line items). **Appendix 8** states the current overhead rates used in estimating FY97 costs in this month's report. ISDS accounting and NASA 533 reporting are based on the calendar provided as **Appendix 9**.

The following is a summary of ISDS overhead burdening by cost center.

IDI Employees

- I. Apply IDI fringe rate (salary or salary-plus, as applicable) to direct labor dollars.
- II. Apply ISDS Indirect Facilities rate (onsite or offsite, as applicable) to direct labor dollars. This rate is unique to the ISDS program, and is not company-wide.
- III. Apply IDI G&A to the resulting total burdened amount (subtotal after I and II above).

CSC Subcontractor Costs

- I. CSC applies company-unique overhead and G&A to direct labor dollars, and provides this as their invoiced cost to IDI.
- II. Apply ISDS Indirect Facilities rate (onsite or offsite, as applicable) to CSC burdened amount in I above.
- III. Apply IDI Material & Handling to CSC burdened amount in I above.
- IV. Apply IDI G&A to the Indirect Facility burden pools, itemized in II.

Consultant (IDI only)

- I. Apply IDI G&A to consultant invoiced dollars.

ODC's (billed by IDI only)

- I. Apply IDI G&A to prime dollars.

3.3 Reconciliation

"A reconciliation report shall be prepared in accordance with the instructions on the reverse side of the 533Q.

The following is a program-level reconciliation of the contract estimates for JPL FY97 only. Due to the varying contractual status of each CWO, it is recommended that the narrative for each CWO be referred to when making deductions about cost performance or funding status. Several CWO Contractor Estimates have got ahead of the contractual paperwork and are more up-to-date than the Negotiated Estimates. In some cases, Contractor Estimates reflect requirements given verbally to ISDS, but not yet received in formal CWO Supplements. Because of this, we do not feel that a program-level reconciliation necessarily depicts an accurate cost comparison.

We have provided the most accurate estimates possible in the Contractor Estimate for these CWOs at the time of this report, regardless of the contractual status, in order to provide JPL with the most current cost projections possible.

A) Total of Individual CWO Contract Values (Based on ISDS target baselines)	\$6,839k
B) Total Negotiated Cost Estimates (Based on CWOs signed by JPL Procurement)	\$6,813k
(C) Estimated Final Contractor Estimate	\$5,860k
D) Projected Underun Delta (B-C)	\$953k
E) Total CWOs not signed by JPL	\$34K

4. RECOMMENDED JPL ACTION

“The Contractor shall identify all critical items that require JPL attention, resolution and/or assistance to successfully maintain or improve the direction of the CWO in order to meet CWO objectives.”

4.1 Contract Work Orders (CWOs)

- ISDS requests formal JPL closure to CWO 34. All effort has been completed.

5. Appendices

5.1 Schedules

5.2 NASA 533M - JPL FY 1997

5.3 Monthly Whole Hours/Dollars Report - JPL FY 1997

5.4 ISDS Cumulative Costs - From Contract Inception

5.5 ISDS Personnel Allocation

5.6 CWO Funding Projections

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5.7 IDI FY96 Provisional Billing Rates

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5.8 IDI FY96 Estimating Overhead Rates

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5.9 ISDS Accounting/Holiday Calendar